

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

1-41. (Canceled)

42. (Currently Amended) A method of degrading filter cake in a subterranean formation comprising the steps of:

combining an acid-releasing degradable material with a solvent or a plasticizer to create a coating solution, wherein the acid-releasing degradable material comprises at least one acid-releasing degradable material selected from the group consisting of: poly(orthoester); a lactide, a poly(lactide); a glycolide; a poly(glycolide); a poly(ϵ -caprolactone); a poly(hydroxybutyrate); a substantially water insoluble anhydride; a poly(anhydride); a poly(amino acid); a mixture of one of the above-listed compounds; a copolymer of two or more of the above-listed compounds; and any combination thereof;

coating the coating solution onto a particulate on-the-fly to create coated particulates, wherein the acid-releasing degradable material comprises a material that is substantially water insoluble;

placing the coated particulates into a subterranean formation so that at least a portion of the coated particulates become incorporated in a pack substantially adjacent to a filter cake;

allowing the acid-releasing degradable material to produce acid; and

allowing the acid to contact and degrade a portion of the filter cake.

43. (Previously Presented) The method of claim 42 wherein the filter cake comprises a filter cake on the walls of a well bore or a filter cake on the walls of a fracture.

44. (Previously Presented) The method of claim 42 wherein the particulates are coated with from about 0.1 % to about 20% acid-releasing degradable material by weight of the particulates.

45. (Currently Amended) The method of claim 42 wherein acid-releasing degradable material comprises a material ~~that is substantially water insoluble and that~~ degrades over time in an aqueous environment.

46. (Previously Presented) The method of claim 42 wherein the solvent comprises at least one solvent selected from the group consisting of: acetone; propylene carbonate; di(propylene glycol) methyl ether; di(propylene glycol) propyl ether; di(propylene glycol) butyl ether; di(propylene glycol) methyl ether acetate; isopropyl alcohol; chloroform; dichloromethane; trichloromethane; 1,2-dichlorobenzene; tetrahydrofuran; benzene; acetonitrile; dioxane; dimethylformamide; toluene; ethyl acetate; isoamyl alcohol; N-methylpyrrolidone; xylene; dichloroacetic acid; m-cresol; hexafluoroisopropanol; diphenyl ether; acetonitrile; methanol; ethyl benzene; naphthalene; naphtha; and any combination thereof.

47. (Previously Presented) The method of claim 42 wherein the plasticizer comprises at least one plasticizer selected from the group consisting of: polyethylene glycol; polyethylene oxide; oligomeric lactic acid; a citrate ester; a glucose monoester; a partially fatty acid ester; PEG monolaurate; triacetin; poly(ϵ -caprolactone); poly(hydroxybutyrate); glycerin-l-benzoate- 2,3-dilaurate; glycerin-2-benzoate-1,3-dilaurate; a starch; bis(butyl diethylene glycol)adipate; ethylphthalylethyl glycolate; glycerine diacetate monocaprylate; diacetyl monoacyl glycerol; polypropylene glycol; poly(propylene glycol)dibenzoate, dipropylene glycol dibenzoate; glycerol; ethyl phthalyl ethyl glycolate; poly(ethylene adipate)disterate; di-iso-butyl adipate; and any combination thereof.

48. (Previously Presented) The method of claim 42 wherein the acid-releasing degradable material comprises a poly(orthoester).

49. (Currently Amended) A method of using a portion of a gravel pack to degrade a portion of a filter cake comprising the steps of:

combining an acid-releasing degradable material with a solvent or a plasticizer to create a coating solution; wherein the acid-releasing degradable material comprises at least one acid-releasing degradable material selected from the group consisting of: poly(orthoester); a poly(ϵ -caprolactone); a poly(hydroxybutyrate); a substantially water insoluble anhydride; a poly(anhydride); a poly(amino acid); a mixture

of one of the above-listed compounds; a copolymer of two or more of the above-listed compounds; and any combination thereof;

coating the coating solution onto gravel on-the-fly to create coated gravel,
wherein the acid-releasing degradable material comprises a material that is substantially water insoluble;

introducing the coated gravel to a well bore having a filter cake so that at least a portion of the coated gravel is incorporated in a gravel pack substantially adjacent to the filter cake;

allowing the acid-releasing degradable material to produce acid; and,
allowing the acid to contact and degrade a portion of the filter cake.

50. (Previously Presented) The method of claim 49 wherein the gravel pack compositions comprises from about 0.1% to about 20% acid-releasing degradable material by weight of the gravel particles.

51. (Currently Amended) The method of claim 49 wherein the acid-releasing degradable material comprises a material ~~that is substantially water insoluble such that~~ [[it]] degrades over time.

52. (Previously Presented) The method of claim 49 wherein the solvent comprises at least one solvent selected from the group consisting of: acetone; propylene carbonate; di(propylene glycol) methyl ether; di(propylene glycol) propyl ether; di(propylene glycol) butyl ether; di(propylene glycol) methyl ether acetate; isopropyl alcohol; chloroform; dichloromethane; trichloromethane; 1,2-dichlorobenzene; tetrahydrofuran; benzene; acetonitrile; dioxane; dimethylformamide; toluene; ethyl acetate; isoamyl alcohol; N-methylpyrrolidone; xylene; dichloroacetic acid; m-cresol; hexafluoroisopropanol; diphenyl ether; acetonitrile; methanol; ethyl benzene; naphthalene; naphtha; and any combination thereof.

53. (Previously Presented) The method of claim 49 wherein the plasticizer comprises at least one plasticizer selected from the group consisting of: polyethylene glycol; polyethylene oxide; oligomeric lactic acid; a citrate ester; a glucose monoester; a partially fatty acid ester; PEG monolaurate; triacetin; poly(ϵ -caprolactone); poly(hydroxybutyrate); glycerin-l-benzoate- 2,3-dilaurate; glycerin-2-benzoate-1,3-dilaurate; a starch; bis(butyl diethylene glycol)adipate; ethylphthalylethyl glycolate;

glycerine diacetate monocaprylate; diacetyl monoacyl glycerol; polypropylene glycol; poly(propylene glycol)dibenzoate, dipropylene glycol dibenzoate; glycerol; ethyl phthalyl ethyl glycolate; poly(ethylene adipate)disterate; di-iso-butyl adipate; and any combination thereof.

54. (Previously Presented) The method of claim 49 wherein the acid-releasing degradable material comprises a poly(orthoester).

55. (Currently Amended) A method of degrading filter cake in a subterranean formation comprising the steps of:

combining an acid-releasing degradable material with a plasticizer to create a coating solution, with the proviso that the plasticizer does not comprise a starch;

coating the coating solution onto a particulate on-the-fly to create coated particulates, wherein the acid-releasing degradable material comprises a material that is substantially water insoluble;

placing the coated particulates into a subterranean formation so that at least a portion of the coated particulates become incorporated in a pack substantially adjacent to a filter cake;

allowing the acid-releasing degradable material to produce acid; and
allowing the acid to contact and degrade a portion of the filter cake.

56. (Previously Presented) The method of claim 55 wherein the filter cake comprises a filter cake on the walls of a well bore or a filter cake on the walls of a fracture.

57. (Previously Presented) The method of claim 55 wherein the particulates are coated with from about 0.1% to about 20% acid-releasing degradable material by weight of the particulates.

58. (Currently Amended) The method of claim 55 wherein acid-releasing degradable material comprises a material ~~that is substantially water insoluble and that degrades over time in an aqueous environment.~~

59. (Previously Presented) The method of claim 55 wherein the acid-releasing degradable material comprises at least one acid-releasing degradable material selected from the group consisting of: a polyester, a poly(orthoester); a lactide, a poly(lactide); a

glycolide; a poly(glycolide); a poly(ϵ -caprolactone); a poly(hydroxybutyrate); a substantially water insoluble anhydride; a poly(anhydride); a poly(amino acid); a mixture of one of the above-listed compounds; a copolymer of two or more of the above-listed compounds; and any combination thereof.

60. (Previously Presented) The method of claim 55 wherein the plasticizer comprises at least one plasticizer selected from the group consisting of: polyethylene glycol; polyethylene oxide; oligomeric lactic acid; a citrate ester; a glucose monoester; a partially fatty acid ester; PEG monolaurate; triacetin; poly(ϵ -caprolactone); poly(hydroxybutyrate); glycerin-l-benzoate- 2,3-dilaurate; glycerin-2-benzoate-1,3-dilaurate; bis(butyl diethylene glycol)adipate; ethylphthalylethyl glycolate; glycerine diacetate monocaprylate; diacetyl monoacyl glycerol; polypropylene glycol; poly(propylene glycol)dibenzoate, dipropylene glycol dibenzoate; glycerol; ethyl phthalyl ethyl glycolate; poly(ethylene adipate)disterate; di-iso-butyl adipate; and any combination thereof.

61. (Previously Presented) The method of claim 55 wherein the acid-releasing degradable material comprises a poly(orthoester).